Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please amend claims 47-50 as indicated below (material to be inserted is in **<u>bold and underline</u>**, material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[ ]]):

<u>Listing of Claims</u>:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)

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15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) A thin-film transistor, comprising:

a source electrode;

a drain electrode;

a gate electrode;

a dielectric insulator; and

a deposited thin-film oxide semiconductive channel,

where the electrodes, dielectric insulator and oxide semiconductive channel are disposed so that the dielectric insulator insulates the gate electrode from the oxide semiconductive channel and from the source electrode and drain electrode and where the oxide semiconductive channel includes a first portion and a second portion, the first portion being doped differently than the second portion so as to achieve a desired variation in a gate threshold voltage required to turn on the thin-film transistor.

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25. (Previously Presented) The thin-film transistor of claim 24, where the first portion of the oxide semiconductive channel is positioned adjacent to the dielectric insulator and is closer to the dielectric insulator than the second portion.

26. (Previously Presented) A thin-film transistor, comprising:

a source electrode;

a drain electrode;

a gate electrode;

a dielectric insulator; and

a deposited thin-film semiconductive channel,

where the electrodes, dielectric insulator and semiconductive channel are disposed so that the dielectric insulator insulates the gate electrode from the semiconductive channel and from the source electrode and drain electrode and where the semiconductive channel includes a first portion and a second portion, the first portion being doped differently than the second portion so as to achieve a_desired variation in a gate threshold voltage required to turn on the thin-film transistor,

where the first portion of the semiconductive channel is positioned adjacent to the dielectric insulator and is closer to the dielectric insulator than the second portion, and

where the first portion of the semiconductive channel is doped with a donor-type impurity to increase positive fixed electrical charge density within the first portion relative to the second portion and thereby produce a negative shift in the gate threshold voltage.

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27. (Original) The thin-film transistor of claim 26, where the semiconductive channel is fabricated from zinc oxide and where the donor-type impurity includes aluminum.

28. (Previously Presented) A thin-film transistor, comprising:

a source electrode;

a drain electrode;

a gate electrode;

a dielectric insulator; and

a deposited thin-film semiconductive channel,

where the electrodes, dielectric insulator and semiconductive channel are disposed so that the dielectric insulator insulates the gate electrode from the semiconductive channel and from the source electrode and drain electrode and where the semiconductive channel includes a first portion and a second portion, the first portion being doped differently than the second portion so as to achieve a_desired variation in a gate threshold voltage required to turn on the thin-film transistor,

where the first portion of the semiconductive channel is positioned adjacent to the dielectric insulator and is closer to the dielectric insulator than the second portion, and

where the first portion of the semiconductive channel is doped with an acceptor-type impurity to increase negative fixed electrical charge density within the first portion relative to the second portion and thereby produce a positive shift in the gate threshold voltage.

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29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Previously Presented) A display, comprising:

a plurality of display elements configured to operate collectively to display images, where each of the display elements includes a thin-film transistor configured to control light emitted by the display element, the thin-film transistor including:

a source electrode;

a drain electrode;

a gate electrode;

a deposited thin-film channel region having a portion doped with an impurity to change the fixed charge density within the portion relative to a remainder of the channel region and disposed between the source and drain

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electrode, where the channel region is a deposited layer fabricated from a binary oxide semiconductor material; and

a dielectric material electrically separating the gate electrode from the channel region.

42. (Original) The display of claim 41, where the channel region is fabricated from zinc oxide.

43. (Original) The display of claim 41, where the channel region is fabricated from tin oxide.

44. (Original) The display of claim 41, where the channel region is fabricated from indium oxide.

45. (Original) The display of claim 41, where the impurity is a donor-type impurity which increases the positive fixed charge density within the portion of the channel region.

46. (Previously Presented) The display of claim 41, where the impurity is an acceptor-type impurity which increases the negative fixed charge density within the portion of the channel region.

47. (Currently Amended) A thin-film transistor made by a process comprising:

forming a gate electrode, source electrode and drain electrode;

disposing a dielectric material so that the dielectric material separates the gate electrode from the source electrode and from the drain electrode;

disposing, via a thin-film process, an oxide **semiconductive** channel material so that the oxide **semiconductive** channel material is in contact with the dielectric material

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and so that the oxide **semiconductive** channel material separates the source electrode and drain electrode; and

doping a portion of the oxide **semiconductive** channel material so that fixed electrical charge density within such portion varies relative to undoped portions of the oxide **semiconductive** channel material, where a thickness of the portion of the oxide **semiconductive** channel material is selected based on a desired gate threshold voltage of the thin-film transistor.

48. (Currently Amended) The thin-film transistor made by the process of claim 47, where doping the portion of the oxide **semiconductive** channel material includes introducing a donor-type impurity into the portion to increase the positive fixed electrical charge density within the portion of the oxide **semiconductive** channel material.

49. (Currently Amended) The thin-film transistor made by the process of claim 47, where doping the portion of the oxide **semiconductive** channel material includes introducing an acceptor-type impurity into the portion to increase the negative fixed electrical charge density within the portion of the oxide **semiconductive** channel material.

50. (Currently Amended) The thin-film transistor made by the process of claim 47, where doping the portion of the oxide **semiconductive** channel material is performed so that the portion of the oxide **semiconductive** channel material extends between the source electrode and the drain electrode.

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